

Description of a New Species of *Platysaurus* and Notes on the Specific Characters of certain Species of Zonuridae, together with Synoptical Keys to all the known South African Species and a résumé of our Knowledge on their Distribution: and a Key to the known Genera of South African Lizards.

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PLATYSAURUS WILHELMI, n. sp.

Distinct from the other species of *Platysaurus* in the more heterogeneous lepidosis of the dorsal surface, in the character of its occipital scute, and in the shape of the head which is relatively broader than in *P. guttatus*.

Occipital of moderate size reaching the interparietal and forming with it a comparatively broad suture in front; a single row of enlarged gular scales. Dorsal scales of the body varying considerably in size, being largest along the three white lines of the female and in corresponding areas in the male, but more especially in the posterior mid-dorsal region, the smaller scales of the intermediate areas being much intermixed with granules.

Ventral scales in eighteen to twenty rows, not transversely elongated in the abdominal region or only slightly so.

Lateral scales with rather prominent tubercles. Scales on arm, forearm, and anterior surface of thigh keeled, more strongly so on the leg. Coloration similar to that of *P. guttatus*, excepting that the pale lateral lines of the female are narrower and more clearly defined; also the white spots of the dorsal surface are less numerous and more regularly arranged, forming one or two rows on each side of the mid-dorsal line; the entire ventral surface of the male is black and the dorsal surface is dull, tinged with green, and marked with ill-defined black spots, the tail being red.

The types are a male and a female collected by Mr. Percy Wilhelm at Nelspruit, Barberton District, and presented to the Transvaal Museum, November, 1907. The male is 194 mm. in total length, the tail being 112 mm.; the total length of the female is 184 mm., its tail being 118 mm. Length of head, in male 19.5 mm., in female 16 mm.; breadth of head, in male 16.6 mm., in female 12.7 mm.

Since the above description was written I have seen three other specimens of this species kindly sent to me by Dr. E. Warren, Director of Natal Government Museum; these come from Ubombo, Zululand, and they agree in all essential respects with the Nelspruit specimens.

PLATYSAURUS GUTTATUS Smith.

The Transvaal Museum has numerous specimens of a species of *Platysaurus* from Woodbush and from Dwas River, neighbouring

localities in the Zoutpansberg District. These no doubt belong to the species which was described (Zool. Jahrb, 1890, p. 605) as *intermedius* by Matschie from specimens which were captured at Haenertsburg, which is quite near to Woodbush. Mr. Boulenger now (P.Z.S., 1907, p. 484) reduces *intermedius* Matsch. as a synonym of *P. guttatus* Smith. It is very probable indeed that Smith's specimens came from the same district, as his locality record is "the neighbourhood of the Limpopo River near the tropic of Capricorn".

Our Woodbush specimens agree with the description of the type specimen, a half-grown male, as given in the B.M. Catalogue for *P. guttatus*, but they do not agree so well with Smith's original description, for he states that the nasal plates are contiguous, which is not the case in any of our specimens, and, moreover, he describes the third and fourth fingers as equal in length, whereas, in all our specimens, the fourth is distinctly longer than the third.

These Zoutpansberg lizards, referable to the species *P. guttatus*, have the following characters, some of which are of diagnostic importance:—

The occipital is usually small, triangular, subtriangular, or very small and oval, not reaching the interparietal; occasionally there is between the occipital and the interparietal an oblong or elongated triangular scute, and in one case only out of more than thirty specimens examined, the occipital itself (or more correctly a scute formed by the fusion of occipital with the intermediate scute found in other specimens) reaches the interparietal, forming with it a suture which, however, is very short.

The ventral scutes are usually in sixteen longitudinal rows, but sometimes there are eighteen, and rarely as many as twenty; these scutes are transversely elongated in the abdominal region, sometimes being twice as broad as long, but in juvenile specimens this may not be the case.

The dorsal scales have in some slight degree a differentiation in size such as I have described for *P. wilhelmi*, but this is not so pronounced as in the latter species, nor is there such an intermingling of granules with the scales proper.

The males have red tails, the throat and belly are of a deep blue colour, and the dorsal surface is uniformly dark with a blue tinge—in life the dorsal coloration is a handsome vivid green—the females have pale tails, the belly is pale with blue centre, the throat is white but striped with oblique black lines, whilst the dorsal surface is of the same ground colour as in the male, but has also numerous small pale spots and usually also three pale longitudinal lines of which the two lateral lines are broader and often ill-defined; rarely the male also has pale spots dorsally. Our largest examples of this species reach a length of 260 mm.

Rhodesian specimens, as represented in the collections of the Rhodesian Museum, present a few points of difference from the Woodbush series. The adult males from Khami River and Matopo Hills agree precisely, except that they are somewhat larger and the belly (but not the throat) is blackish; the females differ from the Woodbush specimens in that the three dorsal lines are sharply defined and have no pale spots between them, but they agree in the dorsal scaling, and in one case only (out of ten) the elongated interparietal forms a comparatively wide suture with the occipital. In this latter case the

species resembles the female of *Wilhelmi*, but is distinct therefrom by the dorsal scaling, by the greater elongation of the head, and by its elongated interparietal scute.

The South African species of *Platysaurus* can be distinguished by aid of the following key:—

Enlarged gular scales in a double row ... *P. torquatus* Pet.

Enlarged gular scales in a single row, no occipital

P. capensis Smith

Occipital usually not reaching the interparietal; dorsal lepidosis practically homogeneous ... *P. guttatus* Smith

Occipital reaching the interparietal and forming with it a comparatively broad suture; dorsal scales varying considerably in size in the same transverse line

P. wilhelmi n. sp.

ZONURUS.

The two commonest Transvaal species of *Zonurus* (*Z. vittifer* and *Z. jonesii*) were also described from insufficient material, and the ascribed specific characters demand some revision.

ZONURUS VITTIFFER Reichenow.—Of this species the Transvaal Museum has numerous specimens, and it is probably the most abundant species in the Transvaal. The original description (*Zool. Anz.*, 1887, p. 372) cites as the chief distinctive character: "Frontonasals very small and four-sided"; this, however, is not always nor even usually the case. The frontonasal is often five-sided and of moderate size or comparatively large; if it is four-sided the prefrontals meet in the mid-line, but when it is five-sided there is usually a small square scute between the frontal and the frontonasal, thus separating the prefrontals, or the large pentagonal frontonasal itself may separate the prefrontals.

The species closely resembles *Z. cordylus*, but differs in that the nasals form a comparatively long median suture and the frontonasal is small, or, if large, not transversely elongated, whilst in *Z. cordylus* the median suture of the nasals is short and the frontonasal is transversely elongated and large; also the dorsal scutes of the second row posteriorly to the parietals are longitudinally elongated, which is not the case in *Z. cordylus* L.

Dr. Jean Roux has proposed (*Zool. Jahrb. Ab. Syst.* XXV, p. 418) to sink this species as a variety of *Z. cordylus* L., but whilst admitting the close relationship of the two forms, I consider that the differences between them are really of specific importance; for, firstly, the above-mentioned differences are structural and quite definite, that is to say, it is easy to distinguish between the two species by consideration of either of these two characters alone, and our long series have nothing whatever that can be regarded as intermediate; and, secondly, they occupy different areas of distribution, *Z. vittifer* being found in the Transvaal and Natal, whilst *Z. cordylus* is found in Cape Colony and ranges northwards along the western part of the sub-continent to tropical West Africa.

Zonurus vittifer reaches no great size, the length of the adult being about 7 inches.

ZONURUS JONESII Boul. is also abundant in the Transvaal. It was described (*Ann. and Mag. N.H.* 6, VII, p. 417) as having pentagonal frontonasals longer than broad, separating the prefrontals and

forming a suture with the frontal; our large series of this species shows that the frontonasal is more usually quadrangular and does not reach the frontal, so that the prefrontals generally form a suture.

Sometimes there is no loreal, this scute having fused with the preocular. Occasionally, too, there are only five upper labials, and not infrequently the frontonasal reaches the rostral.

A very distinctive character is furnished by the scaling of the flanks, these scales being somewhat smaller than the dorsals and separated from each other by granular intervals. Also a very constant character is the dark or black (in spirit specimens) lateral band which is specially marked in the shoulder region.

However, after examining numerous specimens, I have come to the conclusion that the most reliable point of distinction from *Z. cordylus* is to be found in the shape of the head. The differences between these two species are as follows:—

Z. cordylus has the head flattened from above and expanded laterally in the temporal region, and the relation of the greatest breadth to the length (from tip of snout to hind margin of the parietals) in a representative series of specimens is 20·20·7, 20·3-21·2, 20-21·8, 18-19·3, 21·3-23, 20-22, 19·9-20·5, the figures representing actual measurements in millimetres, whereas in *Z. jonesii* the head is not so much flattened, and is only slightly expanded in the temporal region, so that the ratio for this species is 15·8-18·4, 15·7-18·2, 16-18·3, 16·5-19, 15·6-18·8, 15-18·2.

Nevertheless this mode of differentiation is not altogether trustworthy when dealing with half-grown specimens of *Z. cordylus*, as the following figures relating to this species show: 14·5-17, 15·1-17·9. And, indeed, though it is usually quite easy to distinguish between young *cordylus* and *jonesii* when the sum total of the characters is considered, yet rarely a specimen appears which combines together the characters of both species, and identification thereon becomes merely a matter of speculation from the locality data.

Z. cordylus has the head scales smooth or irregularly rugose, whereas in *jonesii* the head scales, including the temporals, are finely and reticulately ribbed all over.

The scales on the dorsal surface of the body are, in *jonesii*, strongly keeled and obliquely ribbed, whereas, in *cordylus*, these scales, at any rate in the mid-dorsal area, are almost or entirely smooth and not ribbed.

The number of transverse rows of dorsal scales (counting from the parietal scutes to the base of the tail) varies in *jonesii* from twenty-three to twenty-six, and in *cordylus* from twenty-seven to twenty-nine. In typical specimens of the two species the lateral scaling of *jonesii*, or the transversely elongated frontonasal of *cordylus*, are good points of distinction, but, occasionally, such characters are misleading. For instance, a half-grown specimen from Selati (Zoutpansberg District), in most respects typically *jonesii*, has large lateral scales strongly imbricated as in *cordylus*. A specimen from Uitenhage (Albany Mus. coll.) has the characteristic shape and general appearance of *jonesii*, but is aberrant in that the lateral scaling is just as in *cordylus*, the frontonasal is transversely elongated and the dorsal scales are in 27 rows. A specimen from Steynsburg, C.C. (Albany Museum coll.) agrees almost precisely with that from Uitenhage, but differs in that the ribbing of the dorsal scales is only very faintly developed.

These last two and a still more doubtful specimen without precise locality constitute the only records with which I am acquainted from eastern Cape Colony, and from the evidence of these aberrant forms it is reasonable to expect that a collection of this species in the same region, an intermediate area between the home of true *cordylus* and that of true *jonesii*, would bring to light a series of intermediates between the two species.

Zonurus jonesii is a small species, usually about 5 inches long, and rarely exceeding $5\frac{1}{2}$ inches in length.

The South African species of *Zonurus* may be recognized by the aid of the following key:—

1. Frontonasal in contact with the rostral. 2.
Frontonasal separated from the rostral.* 3.
2. Head with large spines posteriorly, the dorsal surface (excluding the flanks) with 23-25 transverse rows of scales, about 12 in a row *Z. giganteus* Smith
Head with short spines posteriorly; dorsal surface with about 40 transverse rows of about 20 shields... *Z. warreni* Boul.
3. Flanks granular, about 10 scales in each transverse row dorsally and 8 scales in each ventral row *Z. capensis* Smith
Flanks not granular, having scales more or less like the dorsals 4
4. A supranasal present, nasal very small, lower eyelid with a transparent disk 5
No supranasal, nasal of moderate size, lower eyelid opaque 6
5. Dorsally 32-44 transverse series of scales from occiput to base of tail, the largest row containing 32-38 scales; anterior gular scales flat, moderate... .. *Z. polyzonus* Smith
31 or 32 transverse rows of scales dorsally; anterior gular scales almost granular *Z. pustulatus* Pet.
6. Nasal swollen, hemispherical, pierced in the centre; temporal spines present; dorsal scales in 15 or 16 transverse rows
Z. cataphractus Boie
Nasal not swollen, no temporal spines. 7.
7. Scales of the second row immediately posterior to the parietals longitudinally elongated; median suture of nasals long *Z. vittifer* Reich
Scales of the second row immediately posterior to the parietals not longitudinally elongated. 8.
8. Head depressed and laterally expanded in the temporal region, the greatest breadth being almost equal to the length of the head (from tip of snout to parietals); frontonasal transversely elongated; lateral scales as large as the dorsals and strongly imbricate; dorsals in 27 to 29 transverse rows *Z. cordylus* L.
Head not much depressed and not much expanded in the temporal region, the scutes all finely and reticulately ribbed; lateral scales smaller than dorsals and separated from each other by granular intervals; dorsals in 23 to 26 transverse rows *Z. jonesii* Boul

* This character is not absolutely reliable: in *jonesii*, and I believe also in *cordylus*, a small percentage of the individuals has the frontonasal in contact with the rostral.

CHAMAESAURA.

The four South African species of this genus all occur in the Transvaal, *C. aenea* being the commonest species.

I suspect, however, that *C. didactyla* Boul (Proc. Zool. Soc., 1890, p. 82) will prove to be merely a variety or individual variation of *C. anguina*. According to the descriptions the chief difference lies in the fact that *C. didactyla* has two tiny digits each with a claw, whilst *C. anguina* has only one digit with its small claw; a difference of colour is also recorded. Of these two species we have four specimens, of which one (from Irene, Taylor) is typical *anguina*, another from the same locality, and sent by Mr. Taylor at the same time, is *didactyla*, and the two others are typically *didactyla* so far as the hands are concerned, but the foot in one specimen is *didactyl* on one side and *monodactyl* on the other, whilst in the other specimen the feet can hardly be called *didactyl* as the second digit and claw is so very minute. The colour of these specimens of *C. didactyla* is exactly that recorded for *anguina*. Dr. Jean Roux also records *didactylism* in a limb of a specimen of *C. anguina*. The question of the validity of *C. didactyla* must, however, remain *sub judice* until a good series of specimens can be examined.*

The several species of *Chamaesaura* can be recognized by the aid of the following synopsis:—

Fore limbs wanting; scales in 22 longitudinal and 37 or 38 transverse series to base of tail *C. macrolepis* Cope

Both pairs of limbs pentadactyle, scales in 28 longitudinal and 42 transverse series *C. aenea* Wiegman.

Both pairs of limbs styliform, scales in 26 longitudinal and 38 or 39 transverse series—

(a) with two tiny digits each with a claw, the inner digit shortest *C. didactyla* Boul.

(b) a single digit clawed at the end *C. anguina* Linn.

Pseudocordylus microlepidotus Cuv. See characters of the genus.

DISTRIBUTION OF THE ZONURIDAE.

The exact distribution of the South African reptiles is still incompletely known, for although European workers have from time to time published lists of species obtained by travellers in South Africa, these lists have not been supplemented by local workers. In fact the only faunistic lists published in South Africa or by local workers are those of the Natal Government Museum and of Mr. Chubb in Bulawayo. Records of special groups have been published by Dr. Gough, my predecessor, who dealt with snakes, and by Dr. Duerden, of the Albany Museum, who worked on tortoises.

However, although it is not yet possible to precisely define the limits of distribution of some of the species here dealt with, yet I believe that sufficient data is now forthcoming to enable us to roughly indicate the specific areas of distribution. Material for this purpose has been furnished by the extensive collections of this museum, and for much additional information I am indebted to the authorities of all the other South African Museums who have kindly placed their material at my disposal.

* Since this was written my suspicions have been confirmed on examining the collections of this species in the South African Museum, for specimens from the same localities show all degrees of variation between typical *anguina* and *didactyla*.

Also I have made use of the records to be found in the literature referred to below:—

Bocage.—Herpetology of Angola, 1895. *Jornal de Sciencias Math. Phys.*, Lisboa, 2, 4, 1896. (Bechuanaland, Modder River, and W. Transvaal.)

Boettger.—Ber. Senck. ges. Frankfurt, 1886-1889.

Boulenger.—B.M. Catalogue of Lizards, 1896; P.Z.S., 1897, 800 (N. Nyassaland); P.Z.S., 1902, 2 (Mashonaland); A.M.N.H., 7, 12, 1903 (Richmond District, C.C.); P.Z.S., 1905, 248 (Cape Colony, Natal, Orange River Colony, and Transvaal); P.Z.S., 1907, 2, 483 (Transvaal and Portuguese East Africa); Annals Natal Government Museum, Vol. I, Part 3 (Zululand, Natal).

Chubb.—P.Z.S., 1909, 590. (Matabeleland.)

Fischer.—Jahrb. Hamb. Wiss. Anst. 5, 1887. (German S.W. Africa.)

Matschie.—Zool. Jahrb., 1890. (Transvaal.)

Roux.—Zool. Jahrb., 1907, 25, 405. (Cape Colony, Natal, Transvaal.) *Revue Suisse Zool.*, 15, 1907. (Transvaal, Mozambique.)

Smith.—Zoology of S. Africa, 1849.

Tornier.—Zool. Jahrb. 13, 579. (German East Africa.)

Werner.—Verh. Zool. Ges. Wien. Bd. 43, 1894. (Cape Colony, Natal, Transvaal.)

In accordance with the usual custom, the northern limits of this sub-continent are taken from the Zambezi on the east to the Cunene River on the west, but this line certainly constitutes no natural boundary, for in the eastern portions, the Transvaal and Natal, the lizard fauna shows a preponderating tropical element accompanied by only a minority of forms which are confined to the area in question. On the other hand, Cape Colony has a very distinct and characteristic reptilian fauna which is strictly limited in its distribution, and though in the same region there is to be found a much smaller assembly of reptiles which are also to be found in the Transvaal, yet the majority of these are widely distributed forms extending up to the equatorial region and beyond. At the same time, whilst we must regard the Cape Colony as the principal home of a fauna peculiarly South African, it should not be forgotten that there are a few groups, e.g. the Zonuridae, which as a whole are almost exclusively South African, and the species are more equally distributed in the several parts of the sub-continent, so that, after all, South Africa, as we understand it, has some claim to be regarded as a distinct zoological area whose northern limits are ill-defined because of a strong infiltration of tropical forms.

In the following lists I have not thought it necessary to quote every record with which I am acquainted nor the authority for the record, except in special cases of unusual importance.

ZONURUS GIGANTEUS Smith.

Smith's specimens came from the rocky pinnacles of the Quathlamba Mountains. He suggested that the same species occurs on the mountains of Great Namaqualand, but I have seen no records to substantiate this.

The Transvaal Museum has specimens from Bloemfontein, from Kroonstad (Orange River Colony), and from Vereeniging. The Bloemfontein Museum has many specimens without locality. The

distribution of this species is probably Basutoland, Orange River Colony, and neighbouring portions of the high veld (Transvaal).

ZONURUS WARRENI Boul.

Recorded from Ubombo, Zululand.

ZONURUS CAPENSIS Smith.

Taken by Smith on the Hottentot Holland Mountain near Cape-town. So far as I know, this species has never been taken since.

ZONURUS POLYZONUS Smith.

A widely distributed species.

Fischer records it from Walfish Bay, Angra Pequenna, and Orange River.

The South African Museum has specimens from Steinkopf, Port Nolloth, Calvinia, and Clanwilliam, and as far south as Hoetjes Bay, Touws River, and Matjesfontein; there are some specimens from Burghersdorp and the Middelburg Division in the eastern portion of the Cape Colony; Miss Wilman has taken it at Kimberley; the Albany Museum has a specimen from Steytlerville; and there are a number of specimens without locality in the Bloemfontein Museum.

The most northern record with which I am acquainted is Irene, near Pretoria (Taylor).

The South African Museum has a single record from Natal; we have no specimen of this species from the eastern parts of the Transvaal.

The distribution appears to be German S.W. Africa, Cape Colony (with the exception of the southern coastal districts), Basutoland, and Orange River Colony, part of Natal and south-west Transvaal, and perhaps also—there are no records—British Bechuanaland.

ZONURUS PUSTULATUS Pet.

Recorded from Hereroland, German S.W. Africa.

ZONURUS CATAPHRACTUS Boie.

According to Smith this species is common on the west coast of Cape Colony.

Jean Roux records it from Namaqualand, and the South African Museum has specimens from the Calvinia and Clanwilliam Districts, and from Matjesfontein.

ZONURUS JONESII Boul.

This is the common species of the Pretoria District. It occurs also in the Zoutpansberg District, and the South African Museum has specimens from the Matopo Hills (near Bulawayo) and from Palapye (Bechuanaland); it is found at Kimberley (Miss Wilman), and the Albany Museum has specimens which I refer to this species from Steynsburg and Uitenhage. It seems to have an extensive distribution in the central parts of South Africa, but there are no records from the coastal regions, the Uitenhage specimen excepted.*

* According to a note in the Zoological record the angola species *Z. angolensis* is really synonymous with *jonesii*.

ERRATA.

The records of *Zonurus polyzonus*, and *Chamaesaura anguina* from Irene are incorrect : the former should be Hanover C.C. and the latter Tokai C.C. (*Vide* L. TAYLOR.)

Page 36 (*Zonurus polyzonus*).

Page 37 (*Chamaesaura anguina*).

ZONURUS CORDYLUS L.

Very abundant in the coastal districts of Cape Colony; the most eastern record in the South African Museum is Tsomo, Transkei; there are several records from some of the interior districts of Cape Colony, viz., Middleburg District, Bedford District, and Tulbagh District, but it does not reach so far as the central districts.

This species is recorded from several localities on the west coast of Africa—Walfish Bay, for instance—and Bocage records it from north Angola, where, he says, it occupies a littoral zone. It is not, however, confined to low-lying districts, as it occurs on the slopes of Table Mountain. Further, it is recorded by Tornier from German East Africa, by Boulenger from northern Nyassaland, and from the Pretoria District (Distant's Naturalist in the Transvaal), and by Chubb from Matabeleland,* but I believe that the two latter records at any rate are incorrect, for the Pretoria record was published prior to the separation of *vittifer* as a species distinct from *cordylus*, and all the specimens in the Transvaal Museum which are related to this species really belong to *vittifer* or to *jonesii*, whilst all Matabeleland specimens now in the South African Museum are referable to *jonesii*.

ZONURUS VITTIFFER Reich.

This is abundant in the Zoutpansberg District and occurs also in the Middelburg District, and on the north-west Rand. It is recorded from Ladysmith (Natal), from Reitvlei (Umvoti), from Zululand, and the Albany Museum has a specimen from Teafontein, about fifteen miles north-west of Grahamstown. Apparently its principal home is in the low veld portions of the Transvaal extending southwards into Natal and eastern Cape Colony and westwards for some distance on the high veld of the Transvaal.

PSEUDOCORDYLUS MICROLEPIDOTUS Smith occurs on the hills and mountains of the coastal districts of south and east Cape Colony; it is recorded also from the Richmond District. It is found in Natal, in the Orange River Colony, and in the Transvaal (Wakkerstroom, Pretoria District, and Zoutpansberg District). I have seen no records of this species north of the Transvaal, and none from German S.W. Africa, nor from western Cape Colony.

CHAMAESAURA AENEA Fitz. is common in the Pretoria District, and it occurs also in the Zoutpansberg, Lydenburg, Middelburg, and Standerton Districts of the Transvaal. It is found in the Orange River Colony and in Natal. There are no records of this species from Cape Colony, nor from German S.W. Africa, and none north of the Transvaal.

CHAMAESAURA ANGUINA L. (including also *didactyla* Boul., which is not specifically distinct from *anguina*). This species is common in the coastal districts of south and east Cape Colony, extending up into Pondoland, Zululand, Natal, and the Transvaal (Irene, Pretoria District, Taylor).

The South African Museum has specimens from Namaqualand and from the Worcester Division of Cape Colony.

CHAMAESAURA MACROLEPIS Cope occurs in Natal and Zululand, and the Transvaal Museum has a specimen from White River (Lydenburg District) taken by Mr. A. T. Cooke. The Port Elizabeth Museum has a specimen from that neighbourhood.

* I have recently seen the specimen and it proves to be *jonesii*.

Bocage records this species from the high plateau of south Angola.

PLATYSAURUS CAPENSIS Smith was taken by Smith in the sandy deserts of Great Namaqualand.

PLATYSAURUS GUTTATUS Smith occurs in the Zoutpansberg District of the Transvaal, in Matabeleland, and the South African Museum has specimens of this species from Mashonaland (near Salisbury) and as far south as Victoria West, C.C.

PLATYSAURUS WILHELMI, n. sp., was taken at Nelspruit, Barberton District; it occurs also in Zululand.

PLATYSAURUS TORQUATUS Pet. described from Mozambique.

KEY TO GENERA OF SOUTH AFRICAN LIZARDS.*

1. Limbs present (sometimes much reduced)	10
Limbs none	2
3. Eyes concealed under the skin	3
Eyes not concealed under the skin	6
3. Nostril pierced in a separate nasal	4
Nostril pierced in the large rostral... ..	<i>Typhlosaurus.</i> (An.)
4. Snout rounded or feebly compressed, no large pectoral segments	5
Snout broadly projecting with cutting edge, pectoral shields enlarged	<i>Monopeltis.</i> (Am.)
5. Preanal pores present; an ocular shield	<i>Amphisbaena.</i> (Am.)
No preanal pores and no ocular shield	<i>Chirindia.</i> (Am.)
6. Nostril pierced in the large rostral shield, with the posterior border of which it is connected by a suture	7
Nostril pierced between the rostral and a very small nasal or first labial	8
7. No eyelids, a supranasal	<i>Typhlacontias.</i> (S.)
A transparent lower eyelid, no supranasal	<i>Acontias.</i> (S.)
8. Palatine bones in contact on the median line	<i>Scelotes.</i> (S.)
Palatine bones not meeting on the median line	9
9. Nostril pierced between the rostral and a very small ring-shaped nasal which is situated between the rostral and the first labial	<i>Herpetosaura.</i> (S.)
Nostril pierced between the rostral, the supranasal, the postnasal, and the first labial	<i>Sepsina.</i> (S.)
Nostril pierced between the rostral and first labial	<i>Melanoseps.</i> (S.)
10. Head covered by symmetrical plates	25
Head not covered by symmetrical plates	11
11. Digits not arranged in two bundles forming gasping organs	13
Digits arranged in two bundles forming gasping organs	12
12. Claws simple, scales on soles smooth	<i>Chamaeleon.</i> (C.)
Claws bicuspid, scales on soles spinose	<i>Rhampholeon.</i> (C.)
13. Digits inferiorly modified into adhesive organs, i.e. with swellings on the articulations or lateral expansions of some or all of the phalanges	14
Digits included in a thick web forming a broad palmar surface	<i>Palmatogecko.</i> (G.)
Digits not modified into adhesive organs and not broadly webbed	23

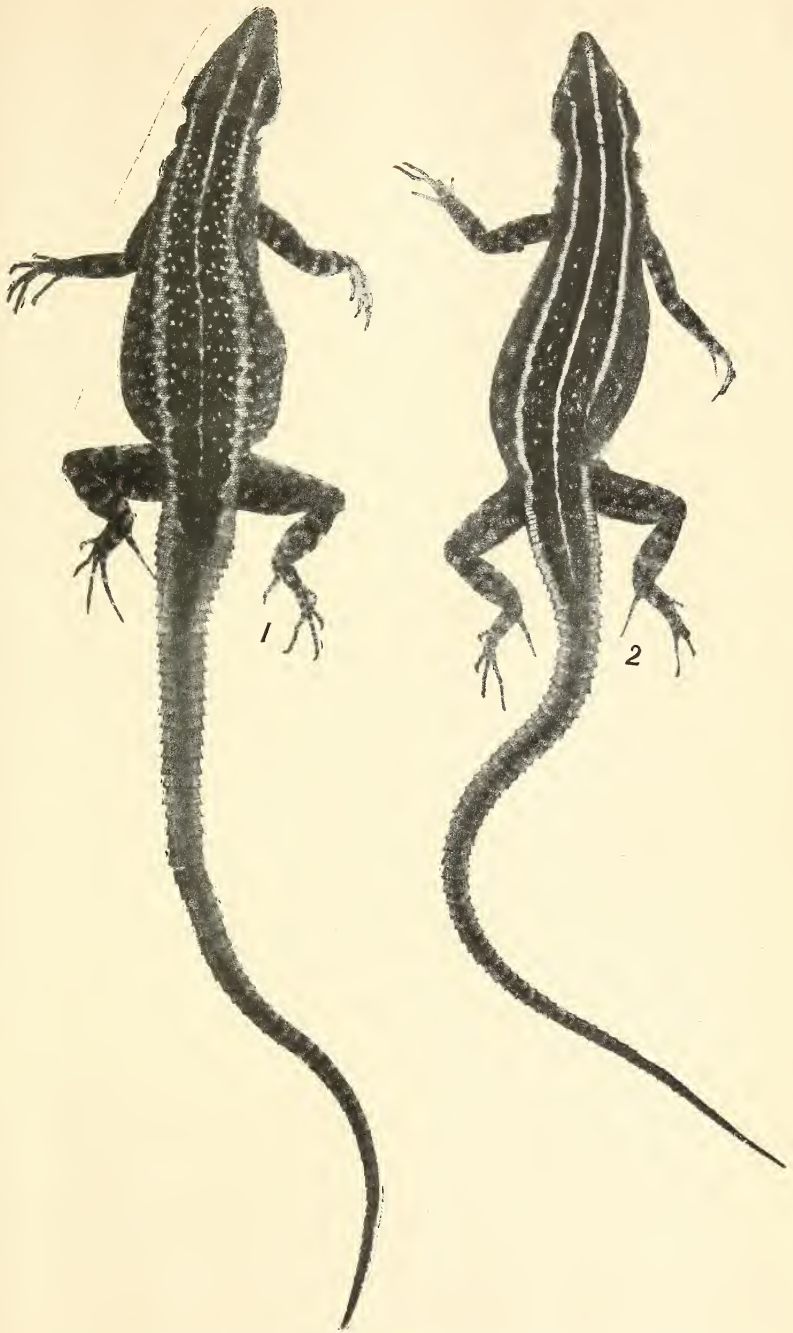
* This Key is a modified and enlarged reproduction of an original drawn up by Dr Gough.

14. Pupil vertical 15
 Pupil round; digits narrow at the base, the dilatation strong and discoid, the distal joint strongly curved, and the claw retractile
Lygodactylus. (G.)
15. Digits with no rudiment of web 16
 The dilated digits with a slight rudiment of a web and inferiorly with transverse undivided lamellae ... *Homopholis*. (G.)
16. Digits short, cylindrical, clawless, the skin swollen on the palmar surface and under the articulations, simulating pads
Chondrodactylus (G.)
 Digits not as above... .. 17
17. The distal phalanges laterally not compressed 18
 The distal phalanges to some extent laterally compressed: the distal joint long, free, rising from within the extremity of the digital expansion *Hemidactylus*. (G.)
18. Digits clawed, dilated at the apex, which is furnished inferiorly with two plates separated by a longitudinal groove ... 19
 Digits not as above... .. 20
19. Digits not dilated at the base, the distal expansion covered above with scales strongly differentiated from those of the basal part
Phyllodactylus. (G.)
 Digits dilated also at the base, the basal expansion with two pairs of large plates at its extremity *Oedura*. (G.)
20. Digits with more than three transverse lamellae inferiorly ... 21
 Digits with only two enlarged scales under their extremity and a nail-like scale above *Colopus* (G.)
21. Digits with minute and rather indistinct retractile claws ... 22
 Digits clawless, a flat nail-like scale on the extremity above, below with undivided angular lamellae distally
Pachydactylus. (G.)
22. Upper surfaces covered with minute granular scales
Rhoptropus. (G.)
 Upper surfaces covered with granules and tubercles of unequal sizes *Elasmodactylus*. (G.)
23. Body covered with granular scales, digits clawed; toes strongly fringed laterally with long pointed scales ... *Ptenopus*. (G.)
 Body covered with imbricate scales 24
24. Pupil round, head short, tongue thick, and not protractile
Agama. (A.)
 Pupil vertical, head elongate, tongue very long, slender, and bifid *Varanus* (V.)
25. The rostral takes no part in forming the nostril 26
 Nostril between the rostral and one or more labials (Scelotes Herpetosaura, and Sepsina) 8
26. Nostril between the first labial and one or more nasals ... 27
 Labials take no part in forming the nostril 30
27. Dorsal scales forming regular longitudinal and transverse series, squarish, or rhomboidal with osteodermal plates 28
 Dorsal scales roundish, soft, intermixed with granules
Pseudocordylus. (Z.)
28. No praefrontals 29
 Praefrontals present, tongue with imbricate scale-like papillae above *Gerrhosaurus*. (Gr.)

29. Lower eyelid scaly (limbs sometimes rudimentary); tongue with oblique plicae above *Tetradactylus*. (Gr.)
 Lower eyelid with a large transparent disk; tongue with imbricate scale-like papillae above *Cordylosaurus*. (Gr.)
30. Nostril in a single nasal 31
 Nostril between two to four nasals 36
31. Dorsal scales granular, head and body strongly depressed, limbs well developed *Platysaurus*. (Z.)
 Dorsal scales not granular, but comparatively large and imbricate 32
32. Dorsal scales lanceolate and strongly keeled; body serpentiform
Chamaesaura. (Z.)
 Dorsal scales not lanceolate but rhomboidal or cycloid-hexagonal 33
33. Tail spinose *Zonurus*. (Z.)
 Tail not spinose 34
34. Eyelids well developed, movable... .. 35
 Eyelid immovable, transparent, covering the eye
Ablepharus. (S.)
35. Lower eyelid scaly *Lygosoma*. (S.)
 Lower eyelid with an undivided, more or less transparent disk
Mabuia. (S.)
36. Collar distinct 38
 No collar 37
37. Digits distinctly keeled inferiorly, headscapes strongly keeled and striated *Ichnotropis*. (L.)
 Digits smooth or indistinctly keeled inferiorly; headscapes smooth or merely finely ribbed *Tropidosaura*. (L.)
38. Digits not fringed laterally 39
 Digits fringed laterally sometimes, only feebly so *Scapteira*. (L.)
39. Digits smooth or indistinctly keeled inferiorly *Nucras*. (L.)
 Digits distinctly keeled inferiorly *Eremias*. (L.)

A. signifies Agamidae.
 G. " Geckonidae.
 Gr. " Gerrhosauridae.
 L. " Lacertidae.
 S. " Scincidae.

V. signifies Varanidae.
 Z. " Zonuridae.
 C. " Chamaeleontidae.
 An. " Anelytropidae.
 Am. " Amphisbaenidae.



- (1) Female of *Platysaurus guttatus*, Smith, from Woodbush.
(2) Female of *Platysaurus wilhelmi*, n. sp.